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=> file biosis caba caplus embase japio lifesci medline scisearch
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FILE 'SCISEARCH' ENTERED AT 10:02:07 ON 22 DEC 2009
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=> e andersen peter/au
E1            2     ANDERSEN PET KRAGH/AU
E2            1     ANDERSEN PETE/AU
E3          837 --> ANDERSEN PETER/AU
E4           17     ANDERSEN PETER A/AU
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E7            6     ANDERSEN PETER ANDREAS/AU
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L2            2 DUP REM L1 (0 DUPLICATES REMOVED)

=> d l-
YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):y
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L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:589018 CAPLUS <<LOGINID::20091222>>
DN 143:114037
TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***
IN Jes, Dietrich; ***Andersen, Peter*** ; Aagaard, Claus
PA Statens Serum Institut, Den.
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005061534	A2	20050707	WO 2004-DK907	20041222
WO 2005061534	A3	20080110		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA

PRAI DK 2003-1942 A 20031223
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:59568 CAPLUS <<LOGINID::20091222>>
DN 140:127185
TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment
IN ***Andersen, Peter*** ; Skjot, Rikke Louise Vinther; Okkels, Li Mei Meng; Brock, Inger; Oettinger, Thomas
PA Den.
SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 10

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20040013685	A1	20040122	US 2001-872505	20010601
EP 1449922	A2	20040825	EP 2004-76605	19980401
EP 1449922	A3	20041117		
EP 1449922	B1	20070815		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY

WO 2001004151	A2	20010118	WO 2000-DK398	20000713
WO 2001004151	A3	20010712		

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            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
            YU, ZA, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 20030147897       A1    20030807    US 2001-804980          20010313
     US 6991797           B2    20060131
     AU 2002301509        A1    20030306    AU 2002-301509          20021010
     AU 2006252186        A2    20070118    AU 2006-252186          20061221
     AU 2006252186        A1    20070118
     JP 2008142079        A     20080626    JP 2007-299636          20071119
     JP 2008301817        A     20081218    JP 2008-131389          20080519
PRAI DK 1997-1277         A     19971110
     US 1998-70488P       P     19980105
     US 1998-246191       B2    19981230
     DK 1999-1020         A     19990713
     US 1999-144011P      P     19990715
     US 2000-615947       A2    20000713
     WO 2000-DK398        A2    20000713
     US 2001-804980       A2    20010313
     DK 1993-798          A     19930702
     US 1993-123182       B2    19930920
     WO 1994-DK273        A2    19940701
     US 1995-465640       A1    19950605
     DK 1997-376          A     19970402
     US 1997-44624P       P     19970418
     US 1998-50739        A3    19980330
     EP 1998-913536       A3    19980401
     JP 1998-541074       A3    19980401
     AU 1998-94338        A3    19981008
     WO 1998-DK438        W     19981008
     US 1999-289388       B2    19990412
     US 2001-791171       A2    20010220
     AU 2002-301509       A3    20021010
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT


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E2          10     SKJOT RASMUSSEN LINE/AU
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E4           3     SKJOT RIKKE L V/AU
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E6           1     SKJOT V/AU
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E8          27     SKJOTH C A/AU
E9           5     SKJOTH C AMBELAS/AU
E10          6     SKJOTH CARSTEN A/AU
E11         26     SKJOTH CARSTEN AMBELAS/AU
E12         30     SKJOTH F/AU

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or Rv3445c or Rv3890c or Rv3891c or Rv3904c or Rv3905c)
L3            1 ("SKJOT R L V"/AU OR "SKJOT RASMUSSEN LINE"/AU OR "SKJOT RIKKE"/
                AU OR "SKJOT RIKKE L V"/AU OR "SKJOT RIKKE LOUISE VINTHER"/AU)
                AND (RV1036C OR RV2348C OR RV2653C OR RV2654C OR RV3020C OR RV34
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44C OR RV3445C OR RV3890C OR RV3891C OR RV3904C OR RV3905C)

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L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:59568 CAPLUS <<LOGINID::20091222>>
DN 140:127185
TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment
IN Andersen, Peter; ***Skjot, Rikke Louise Vinther*** ; Okkels, Li Mei Meng; Roettinger, Inger; Oettinger, Thomas
PA Den.
SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980. CODEN: USXXCO
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040013685	A1	20040122	US 2001-872505	20010601
	EP 1449922	A2	20040825	EP 2004-76605	19980401
	EP 1449922	A3	20041117		
	EP 1449922	B1	20070815		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	WO 2001004151	A2	20010118	WO 2000-DK398	20000713
	WO 2001004151	A3	20010712		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 20030147897	A1	20030807	US 2001-804980	20010313
	US 6991797	B2	20060131		
	AU 2002301509	A1	20030306	AU 2002-301509	20021010
	AU 2006252186	A2	20070118	AU 2006-252186	20061221
	AU 2006252186	A1	20070118		
	JP 2008142079	A	20080626	JP 2007-299636	20071119
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PRAI	DK 1997-1277	A	19971110		
	US 1998-70488P	P	19980105		
	US 1998-246191	B2	19981230		
	DK 1999-1020	A	19990713		
	US 1999-144011P	P	19990715		
	US 2000-615947	A2	20000713		
	WO 2000-DK398	A2	20000713		
	US 2001-804980	A2	20010313		
	DK 1993-798	A	19930702		
	US 1993-123182	B2	19930920		
	WO 1994-DK273	A2	19940701		
	US 1995-465640	A1	19950605		
	DK 1997-376	A	19970402		
	US 1997-44624P	P	19970418		

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     US 1998-50739         A3    19980330
     EP 1998-913536        A3    19980401
     JP 1998-541074        A3    19980401
     AU 1998-94338         A3    19981008
     WO 1998-DK438         W     19981008
     US 1999-289388        B2    19990412
     US 2001-791171        A2    20010220
     AU 2002-301509        A3    20021010
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT


=> s Rv1036c or Rv2348c or Rv2653c or Rv2654c or Rv3020c or Rv3444c or Rv3445c
or Rv3890c or Rv3891c or Rv3904c or Rv3905c
L4            70 RV1036C OR RV2348C OR RV2653C OR RV2654C OR RV3020C OR RV3444C
                 OR RV3445C OR RV3890C OR RV3891C OR RV3904C OR RV3905C

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PROCESSING COMPLETED FOR L4
L5             9 DUP REM L4 (61 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):y

L5   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2009 ACS on STN  DUPLICATE 1
AN   2009:720278  CAPLUS <<LOGINID::20091222>>
       Correction of: 2009:592725
DN   151:31776
       Correction of: 150:537909
TI   Multimers of MHC complexed with Mycobacterium tuberculosis peptide as
     vaccine and for diagnosis, prognosis and therapy of tuberculosis
IN   Scholler, Jorgen; Brix, Liselotte; Pedersen, Henrik; Jakobsen, Tina
PA   Dako Denmark A/S, Den.
SO   PCT Int. Appl., 1642pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 27
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2009039854       A2     20090402    WO 2008-XI339          20080929
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             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
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             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRAI DK 2007-1395         A      20070927
     US 2007-960394P      P      20070927
AB   The present invention relates to MHC-peptide complexes and uses thereof in
     the diagnosis of, treatment of or vaccination against a disease in an
     individual.  More specifically the invention discloses MHC complexes
```

comprising Mycobacterium tuberculosis antigenic peptides and uses there of. [This abstr. record is one of 51 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints].

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv1036c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv2348c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv2653c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv2654c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3020c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3444c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3445c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3890c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3891c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for

diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3904c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***Rv3905c*** ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

L5 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:143400 CAPLUS <<LOGINID::20091222>>
DN 150:207384
TI Primers for the amplification of polymorphic genes of Mycobacterium tuberculosis for identification of subspecies
IN Massire, Christian; Sampath, Rangarajan; Blyn, Lawrence B.; Ecker, David J.
PA Ibis Biosciences, Inc., USA
SO PCT Int. Appl., 169pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2009017902	A2	20090205	WO 2008-US67911	20080623
WO 2009017902	A3	20091015		

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRAI	US 2007-945850P	P	20070622
	US 2008-37884P	P	20080319

AB Primers directed against a no. of highly variable genes of Mycobacterium tuberculosis are described for use in the identification and typing of subspecies. Amplicons prepd. with these primers may be analyzed by size or by base compn. Drug-resistant strains of Mycobacterium tuberculosis may be identified in human clin. samples and as such, provide for methods of treatment of humans infected with drug resistant strains of Mycobacterium tuberculosis. Development of the informative primer pairs, target genes, and anal. methods, is demonstrated.

IT Gene, microbial
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***rv2348c*** , in typing of Mycobacterium tuberculosis; primers

for amplification of polymorphic genes of Mycobacterium tuberculosis for identification of subspecies)

L5 ANSWER 3 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 2
AN 2008:559383 BIOSIS <<LOGINID::20091222>>
DN PREV200800559382
TI Molecular features governing the stability and specificity of functional complex formation by Mycobacterium tuberculosis CFP-10/ESAT-6 family proteins.
AU Lightbody, Kirsty L.; Ilghari, Dariush; Waters, Lorna C.; Carey, Gemma; Bailey, Mark A.; Williamson, Richard A.; Renshaw, Philip S.; Carr, Mark D. [Reprint Author]
CS Univ Leicester, Dept Biochem, Henry Wellcome Bldg, Leicester LE1 9HN, Leics, UK
mdc12@le.ac.uk
SO Journal of Biological Chemistry, (JUN 20 2008) Vol. 283, No. 25, pp. 17681-17690.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
LA English
ED Entered STN: 15 Oct 2008
Last Updated on STN: 15 Oct 2008
AB The Mycobacterium tuberculosis complex CFP-10/ESAT-6 family proteins play essential but poorly defined roles in tuberculosis pathogenesis. In this article we report the results of detailed spectroscopic studies of several members of the CFP10/ESAT-6 family. This work shows that the CFP-10/ESAT-6 related proteins, Rv0287 and Rv0288, form a tight 1:1 complex, which is predominantly helical in structure and is predicted to closely resemble the complex formed by CFP-10 and ESAT-6. In addition, the Rv0287.Rv0288 complex was found to be significantly more stable to both chemical and temperature induced denaturation than CFP-10.ESAT-6. This approach demonstrated that neither Rv0287.Rv0288 nor the CFP-10.ESAT-6 complexes are destabilized at low pH (4.5), indicating that even in low pH environments, such as the mature phagosome, both Rv0287.Rv0288 and CFP-10.ESAT-6 undoubtedly function as complexes rather than individual proteins. Analysis of the structure of the CFP-10.ESAT-6 complex and optimized amino acid sequence alignments of M. tuberculosis CFP-10/ESAT-6 family proteins revealed that residues involved in the intramolecular contacts between helices are conserved across the CFP-10/ ESAT-6 family, but not those involved in primarily intermolecular contacts. This analysis identified the molecular basis for the specificity and stability of complex formation between CFP-10/ ESAT-6 family proteins, and indicates that the formation of functional complexes with key roles in pathogenesis will be limited to genome partners, or very closely related family members, such as Rv0287/Rv0288 and Rv3019c/ ***Rv3020c*** .
AB. . . key roles in pathogenesis will be limited to genome partners, or very closely related family members, such as Rv0287/Rv0288 and Rv3019c/ ***Rv3020c*** .

L5 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:589018 CAPLUS <<LOGINID::20091222>>
DN 143:114037
TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***
IN Jes, Dietrich; Andersen, Peter; Aagaard, Claus

PA Statens Serum Institut, Den.
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005061534	A2	20050707	WO 2004-DK907	20041222
WO 2005061534	A3	20080110		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA

PRAI DK 2003-1942 A 20031223

AB The invention is related to an immunogenic compn., vaccine or pharmaceutical compn. for preventing, boosting or treating infection caused by a species of the tuberculosis complex (M. tuberculosis, M. bovis, M. africanum, M. microti). The immunogenic compn., vaccine or pharmaceutical compn. comprise a fusion polypeptide, the units of the fusion polypeptide being M. tuberculosis antigens. Further, the invention is relates to the use of a vaccine comprising a fusion polypeptide sequence or nucleic acid sequence of the invention given at the same time as BCG, either mixed with BCG or administered sep. at different sites or routes for prepg. said immunogenic compn., vaccine, or pharmaceutical compn. Further, the invention is related to the use of a vaccine comprising a fusion polypeptide sequence or nucleic acid sequence given as BCG booster vaccine.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***

ST Mycobaccterium antigen Ag85A Ag85B TB104 ORF2c Rv0285 Rv0287 ***Rv1036c*** ; chimeric protein Myycobacterium antigen BCG tuberculosis vaccine

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Ag85A; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Ag85B; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ORF2c; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Rv0285; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Rv0287; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(***Rv1036c*** ; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TB10.4; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Animals
DNA sequences
Molecular cloning
Mycobacterium
Mycobacterium BCG
Mycobacterium africanum
Mycobacterium bovis
Mycobacterium microti
Mycobacterium tuberculosis
Protein sequences
Tuberculosis
Vaccines
(improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Fusion proteins (chimeric proteins)
Nucleic acids
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Drug delivery systems

(injections, i.m.; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Drug delivery systems
(injections, s.c.; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Drug delivery systems
(intradermal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Drug delivery systems
(mucosal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Vaccines
(synthetic; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT Drug delivery systems
(transdermal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT 857713-16-7P 857713-17-8P 857713-18-9P 857713-19-0P 857713-20-3P
857713-21-4P 857713-22-5P 857713-23-6P 857713-24-7P 857713-25-8P
857713-26-9P 857713-27-0P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT 857713-04-3P 857713-05-4P 857713-06-5P 857713-07-6P 857713-08-7P
857713-09-8P 857713-10-1P 857713-11-2P 857713-12-3P 857713-13-4P
857713-14-5P 857713-15-6P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleotide sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

IT 857715-99-2 857716-00-8 857716-01-9 857716-02-0 857716-03-1
857716-04-2 857716-05-3
RL: PRP (Properties)
(unclaimed protein sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and ***Rv1036c***)

L5 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:59568 CAPLUS <<LOGINID::20091222>>
DN 140:127185
TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment
IN Andersen, Peter; Skjot, Rikke Louise Vinther; Okkels, Li Mei Meng; Brock, Inger; Oettinger, Thomas
PA Den.
SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980.

CODEN: USXXCO
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040013685	A1	20040122	US 2001-872505	20010601
	EP 1449922	A2	20040825	EP 2004-76605	19980401
	EP 1449922	A3	20041117		
	EP 1449922	B1	20070815		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	WO 2001004151	A2	20010118	WO 2000-DK398	20000713
	WO 2001004151	A3	20010712		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 20030147897	A1	20030807	US 2001-804980	20010313
	US 6991797	B2	20060131		
	AU 2002301509	A1	20030306	AU 2002-301509	20021010
	AU 2006252186	A2	20070118	AU 2006-252186	20061221
	AU 2006252186	A1	20070118		
	JP 2008142079	A	20080626	JP 2007-299636	20071119
	JP 2008301817	A	20081218	JP 2008-131389	20080519
PRAI	DK 1997-1277	A	19971110		
	US 1998-70488P	P	19980105		
	US 1998-246191	B2	19981230		
	DK 1999-1020	A	19990713		
	US 1999-144011P	P	19990715		
	US 2000-615947	A2	20000713		
	WO 2000-DK398	A2	20000713		
	US 2001-804980	A2	20010313		
	DK 1993-798	A	19930702		
	US 1993-123182	B2	19930920		
	WO 1994-DK273	A2	19940701		
	US 1995-465640	A1	19950605		
	DK 1997-376	A	19970402		
	US 1997-44624P	P	19970418		
	US 1998-50739	A3	19980330		
	EP 1998-913536	A3	19980401		
	JP 1998-541074	A3	19980401		
	AU 1998-94338	A3	19981008		
	WO 1998-DK438	W	19981008		
	US 1999-289388	B2	19990412		
	US 2001-791171	A2	20010220		
	AU 2002-301509	A3	20021010		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention is based on the identification and characterization of 3 antigens, including ***Rv2653c*** , ***Rv2654c*** and RD1-ORF5, from Mycobacterium tuberculosis. The invention is directed to the polypeptides and immunol. active fragments thereof, the genes encoding

them, immunol. compns. such as diagnostic reagents contg. the polypeptides. The invention related to diagnosing tuberculosis caused by virulent mycobacteria in an animal, including a human being. The invention related to treating tuberculosis using antigens isolated from Mycobacterium tuberculosis.

AB The present invention is based on the identification and characterization of 3 antigens, including ***Rv2653c*** , ***Rv2654c*** and RD1-ORF5, from Mycobacterium tuberculosis. The invention is directed to the polypeptides and immunol. active fragments thereof, the genes encoding. . .

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(***Rv2653c*** ; antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment)

IT Antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(***Rv2654c*** ; antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment)

L5 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 3
AN 2004:452535 BIOSIS <<LOGINID::20091222>>
DN PREV200400456980
TI Characterisation of complex formation between members of the Mycobacterium tuberculosis complex CFP-10/ESAT-6 protein family: towards an understanding of the rules governing complex formation and thereby functional flexibility.
AU Lightbody, Kirsty L.; Renshaw, Philip S.; Collins, Michelle L.; Wright, Rebecca L.; Hunt, Debbie M.; Gordon, Stephen V.; Hewinson, R. Glyn; Buxton, Roger S.; Williamson, Richard A.; Carr, Mark D. [Reprint Author]
CS Dept Biochem, Univ Leicester, Adrian Bldg,Univ Rd, Leicester, Leics, LE1 7RH, UK
mdc12@le.ac.uk
SO FEMS Microbiology Letters, (September 1 2004) Vol. 238, No. 1, pp. 255-262. print.
CODEN: FMLED7. ISSN: 0378-1097.
DT Article
LA English
ED Entered STN: 24 Nov 2004
Last Updated on STN: 24 Nov 2004
AB We have previously shown that the secreted M. tuberculosis complex proteins CFP-10 and ESAT-6 form a tight, 1:1 complex, which may represent their functional form. In the work reported here a combination of yeast two-hybrid and biochemical analysis has been used to characterise complex formation between two other pairs of CFP-10/ESAT-6 family proteins (Rv0287/Rv0288 and Rv3019c/ ***Rv3020c***) and to determine whether complexes can be formed between non-genome paired members of the family. The results clearly demonstrate that Rv0287/Rv0288 and Rv3019c/3020c form tight complexes, as initially observed for CFP-10/ ESAT-6. The closely related Rv0287/Rv0288 and Rv3019c/ ***Rv3020c*** proteins are also able to form non-genome paired complexes (Rv0287/Rv3019c and Rv0288/ ***Rv3020c***), but are not capable of binding to the more distantly related CFP-10/ESAT-6 proteins. Copyright 2004 Federation of European

Microbiological Societies. Published by Elsevier B.V. All rights reserved.

AB. . . and biochemical analysis has been used to characterise complex formation between two other pairs of CFP-10/ESAT-6 family proteins (Rv0287/Rv0288 and Rv3019c/ ***Rv3020c***) and to determine whether complexes can be formed between non-genome paired members of the family. The results clearly demonstrate that Rv0287/Rv0288 and Rv3019c/3020c form tight complexes, as initially observed for CFP-10/ ESAT-6. The closely related Rv0287/Rv0288 and Rv3019c/ ***Rv3020c*** proteins are also able to form non-genome paired complexes (Rv0287/Rv3019c and Rv0288/ ***Rv3020c***), but are not capable of binding to the more distantly related CFP-10/ESAT-6 proteins. Copyright 2004 Federation of European Microbiological Societies.. . .

L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:490054 CAPLUS <<LOGINID::20091222>>
DN 139:130735
TI The senX3-regX3 two-component regulatory system of Mycobacterium tuberculosis is required for virulence
AU Parish, Tanya; Smith, Debbie A.; Roberts, Gretta; Betts, Joanna; Stoker, Neil G.
CS Department of Medical Microbiology, Barts and the London, Queen Mary's School of Medicine and Dentistry, London, E1 2AD, UK
SO Microbiology (Reading, United Kingdom) (2003), 149(6), 1423-1435
CODEN: MROBEO; ISSN: 1350-0872
PB Society for General Microbiology
DT Journal
LA English
AB Two-component regulatory systems have been widely implicated in bacterial virulence. To investigate the role of one such system in Mycobacterium tuberculosis, a strain was constructed in which the senX3-regX3 system was deleted by homologous recombination. The mutant strain (Tame15) showed a growth defect after infection of macrophages and was attenuated in both immunodeficient and immunocompetent mice. Competitive hybridization of total RNA from the wild-type and mutant strains to a whole-genome microarray was used to identify changes in gene expression resulting from the deletion. One operon was highly up-regulated in the mutant, indicating that regX3 probably has a role as a repressor of this operon. Other genes which were up- or down-regulated were also identified. Many of the genes showing down-regulation are involved in normal growth of the bacterium, indicating that the mutant strain is subject to some type of growth slow-down or stress. Genes showing differential expression were further grouped according to their pattern of gene expression under other stress conditions. From this anal. 50 genes were identified which are the most likely to be controlled by RegX3. Most of these genes are of unknown function and no obvious motifs were found upstream of the genes identified. Thus, it has been demonstrated that the senX3-regX3 two-component system is involved in the virulence of M. tuberculosis and a no. of genes controlled by this system have been identified.
OSC.G 61 THERE ARE 61 CAPLUS RECORDS THAT CITE THIS RECORD (61 CITINGS)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(***Rv3890c*** , up-regulation of, in senX3-regX3 deleted mutant; senX3-regX3 two-component regulatory system of Mycobacterium tuberculosis is required for virulence)

L5 ANSWER 8 OF 9 MEDLINE on STN
AN 20015513?6 MEDLINE <<LOGINID::20091222>>
DN PubMed ID: 11597336
TI The ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G+C Gram-positive bacteria.
AU Gey Van Pittius N C; Gamieldien J; Hide W; Brown G D; Siezen R J; Beyers A D
CS US/MRC Centre for Molecular and Cellular Biology, Department of Medical Biochemistry, University of Stellenbosch, Tygerberg, 7505, South Africa.. ngvp@sun.ac.za
SO Genome biology, (2001) Vol. 2, No. 10, pp. RESEARCH0044. Electronic Publication: 2001-09-19.
Journal code: 100960660. E-ISSN: 1465-6914.
Report No.: NLM-PMC57799.
CY England: United Kingdom
DT (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LA English
FS Priority Journals
EM 200201
ED Entered STN: 15 Oct 2001
Last Updated on STN: 5 Jan 2003
Entered Medline: 10 Jan 2002
AB BACKGROUND: The genome of Mycobacterium tuberculosis H37Rv has five copies of a cluster of genes known as the ESAT-6 loci. These clusters contain members of the CFP-10 (lhp) and ESAT-6 (esat-6) gene families (encoding secreted T-cell antigens that lack detectable secretion signals) as well as genes encoding secreted, cell-wall-associated subtilisin-like serine proteases, putative ABC transporters, ATP-binding proteins and other membrane-associated proteins. These membrane-associated and energy-providing proteins may function to secrete members of the ESAT-6 and CFP-10 protein families, and the proteases may be involved in processing the secreted peptide. RESULTS: Finished and unfinished genome sequencing data of 98 publicly available microbial genomes has been analyzed for the presence of orthologs of the ESAT-6 loci. The multiple duplicates of the ESAT-6 gene cluster found in the genome of M. tuberculosis H37Rv are also conserved in the genomes of other mycobacteria, for example M. tuberculosis CDC1551, M. tuberculosis 210, M. bovis, M. leprae, M. avium, and the avirulent strain M. smegmatis. Phylogenetic analyses of the resulting sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 (***Rv3444c*** -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of Corynebacterium diphtheriae and Streptomyces coelicolor. CONCLUSIONS: Comparative genomic analysis revealed that the presence of the ESAT-6 gene cluster is a feature of some high-G+C Gram-positive bacteria. Multiple duplications of this cluster have occurred and are maintained only within the genomes of members of the genus Mycobacterium.
AB . . . sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 (***Rv3444c*** -3450c) is ancestral. Region 4 is also the only region for
which an ortholog could be found in the genomes of. . .

L5 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2002:211028 CAPLUS <<LOGINID::20091222>>
DN 137:211652
TI The ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G + C Gram-positive bacteria
AU Gey van Pittius, Nico C.; Gamieldien, Junaid; Hide, Winston; Brown, Gordon D.; Siezen, Roland; Beyers, Albert D.
CS Dep. Medical Biochemistry, Univ. Stellenbosch, Tygerberg, 7505, S. Afr.
SO GenomeBiology [online computer file] (2001), 2(10), No pp. given
CODEN: GNBLFW; ISSN: 1465-6914
URL: http://genomebiology.com/2001/2/10/research/0044
PB BioMed Central Ltd.
DT Journal; (online computer file)
LA English
AB Background: The genome of Mycobacterium tuberculosis H37Rv has five copies of a cluster of genes known as the ESAT-6 loci. These clusters contain members of the CFP-10 (1hp) and ESAT-6 (esat-6) gene families (encoding secreted T-cell antigens that lack detectable secretion signals) as well as genes encoding secreted, cell-wall-assocd. subtilisin-like serine proteases, putative ABC transporters, ATP-binding proteins and other membrane-assocd. proteins. These membrane-assocd. and energy-providing proteins may function to secrete members of the ESAT-6 and CFP-10 protein families, and the proteases may be involved in processing the secreted peptide. Results: Finished and unfinished genome sequencing data of 98 publicly available microbial genomes has been analyzed for the presence of orthologs of the ESAT-6 loci. The multiple duplicates of the ESAT-6 gene cluster found in the genome of M. tuberculosis H37Rv are also conserved in the genomes of other mycobacteria, for example M. tuberculosis CDC1551, M. tuberculosis 210, M. bovis, M. leprae, M. avium, and the avirulent strain M. smegmatis. Phylogenetic analyses of the resulting sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 (***Rv3444c*** -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of Corynebacterium diphtheriae and Streptomyces coelicolor. Conclusions: Comparative genomic anal. revealed that the presence of the ESAT-6 gene cluster is a feature of some high-G+C Gram-pos. bacteria. Multiple duplications of this cluster have occurred ad are maintained only within the genomes of members of the genus Mycobacterium.
OSC.G 31 THERE ARE 31 CAPLUS RECORDS THAT CITE THIS RECORD (31 CITINGS)
RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB . . . sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 (***Rv3444c*** -3450c) is ancestral. Region 4 is also the only region for
which an ortholog could be found in the genomes of. . .
IT Mutation
(duplication, order of gene clusters; gene cluster known as region 4 (***Rv3444c*** -3450c) is ancestral; ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G + C Gram-pos. bacteria)